

Flight Scientist Report
Tuesday 02/22/2022 ACTIVATE RF127

Flight Type: Statistical Survey Flight
Flight Route:
Special Notes: Second of two flights today.

King Air

Pilot report (Wusk):

Second joint flight of the day. Planned route was KLF1 ATLIC ZIBUT TILED ZIBUT ATLIC KFL1. UC12 took off just after the HU25. Route flown as planned. Good coincidence throughout the flight. Three sondes dropped. Crew was Sandeen, Wusk, Seaman.

Flight scientist report (Seaman):

RF127

2/22/2022

Takeoff: 18:43 utc

Landing: 22:18 utc

Flight path:

KLF1 ATLIC ZIBUT TILED ZIBUT ATLIC KLF1

Ops Notes:

Falcon took off first.

Instrument notes:

All instruments operated nominally. HSRL-2 Cals and baseline done in endpoint turn.

Science notes:

3 layers present at start of flight. Layers merged as flight went on. Cloud deck changed altitude between 7kft and 3 kft through out flight.

Sonde drops:

- 1) ZIBUT
- 2) Turnaround at TILED
- 3) ATLIC (near coast)

Falcon

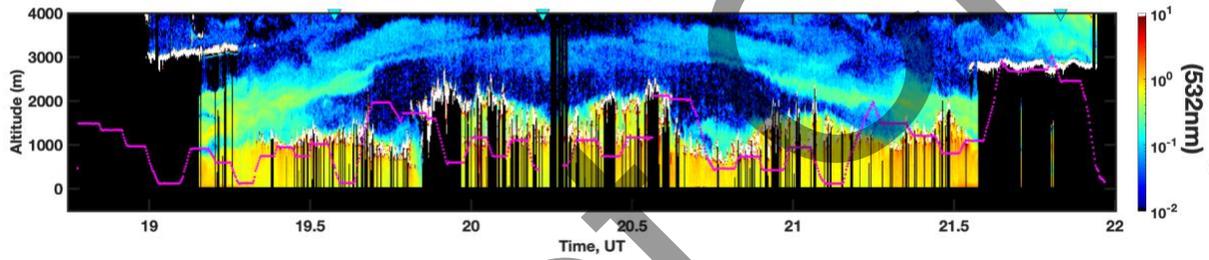
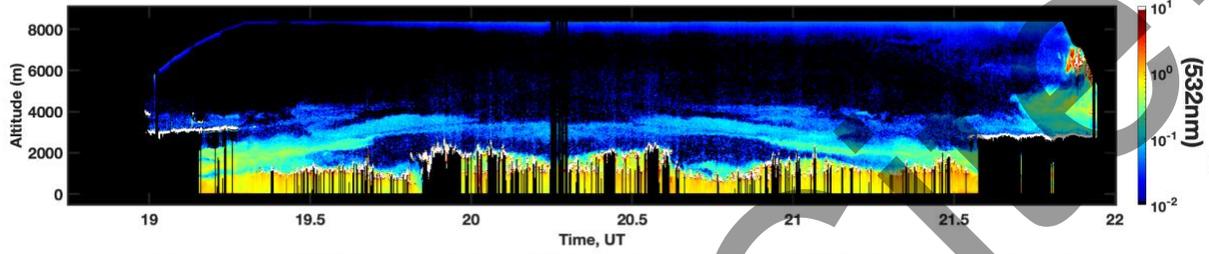
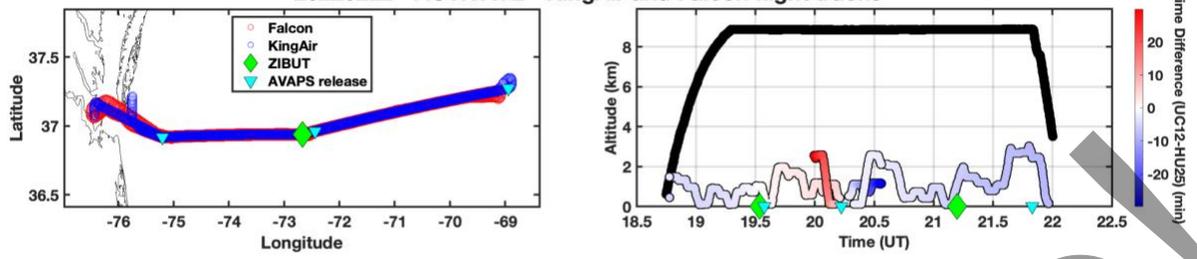
Pilot report (Baxley):

Pilots: Slover/Baxley; QNCs: Crosbie/Winstead KLF1-ATLIC-ZIBUT-TILED-ZIBUT-ATLIC-KFL1 Joint HU-25 and B200 mission flown as planned, weather as expected. No anomalies noted.

Flight scientist report (Crosbie):

Stat survey ZIBUT-TILED. The mid cloud over the coastal region for the morning flight also extended to the region to the east of Langley. A broken Sc layer was also present over the peninsula at ~4500ft, this decayed quickly offshore. Initially on the outbound clear modules were used and the mid-cloud aloft was ignored. The MBL became more defined once further offshore and once clear of the mid-cloud and also over warmer water, the MBL deepened and ShCu started to form. The clouds deepened with distance to the east, and there was evidence of thin stratiform cloud forming near the cloud tops. Very low particle numbers were observed in the vicinity of these stratiform clouds which were mostly comprised of drizzle drops. The stratiform layers were connected to a core which was subsequently sampled. The core contained a droplet mode although numbers were still lower than typical (<100/cc). Further east, the clouds returned back to fair wx Cu with lower cloud tops. On return, the deeper region was once again crossed in the upper part of the cloud layer and the low aerosol environment was sampled a second time. On the inbound leg from ZIBUT, the low Cu ended near where the mid-cloud started and we climbed to sample that layer. 2x 3min legs were flown in the cloud with porpoise climbs to briefly sample the environment above on either end, a BCB leg was then flown before RTB.

20220222 - ACTIVATE - KingAir and Falcon flight tracks

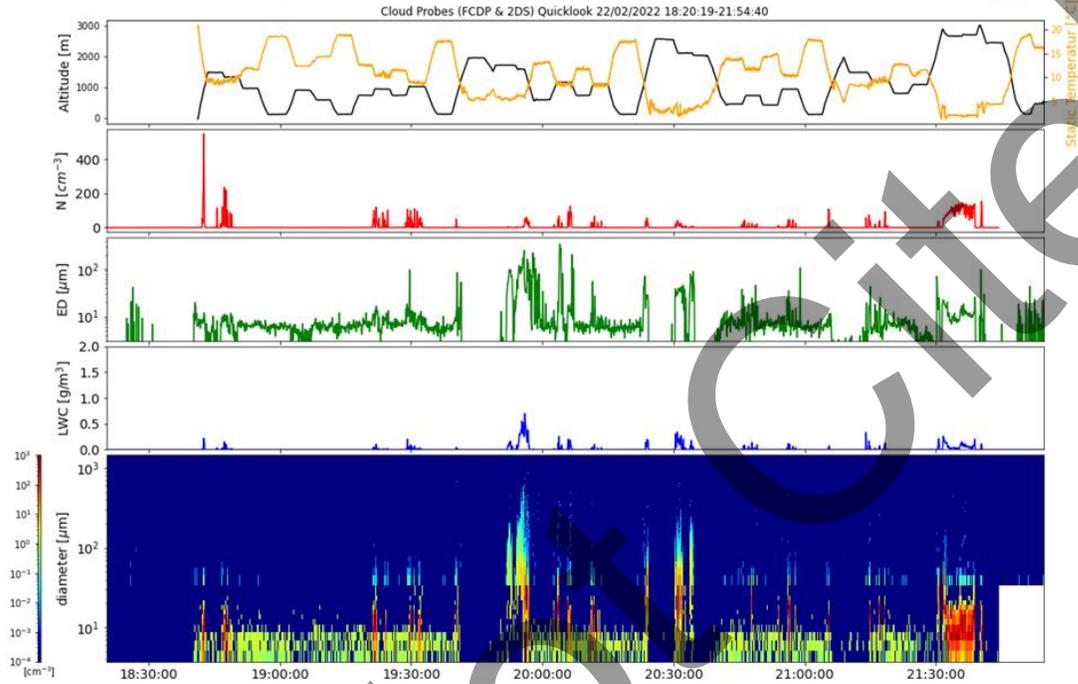


DO NOT

Quicklook ACTIVATE Cloud Probes (FCDP & 2DS) Quicklook

preliminary data, only for quicklook use

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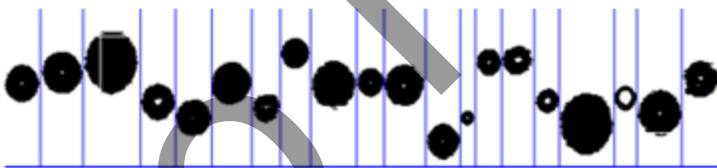
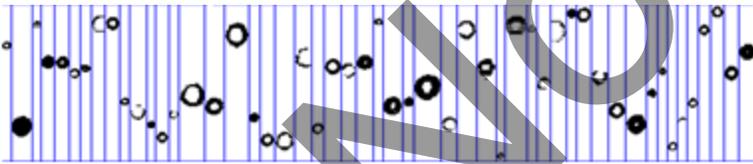
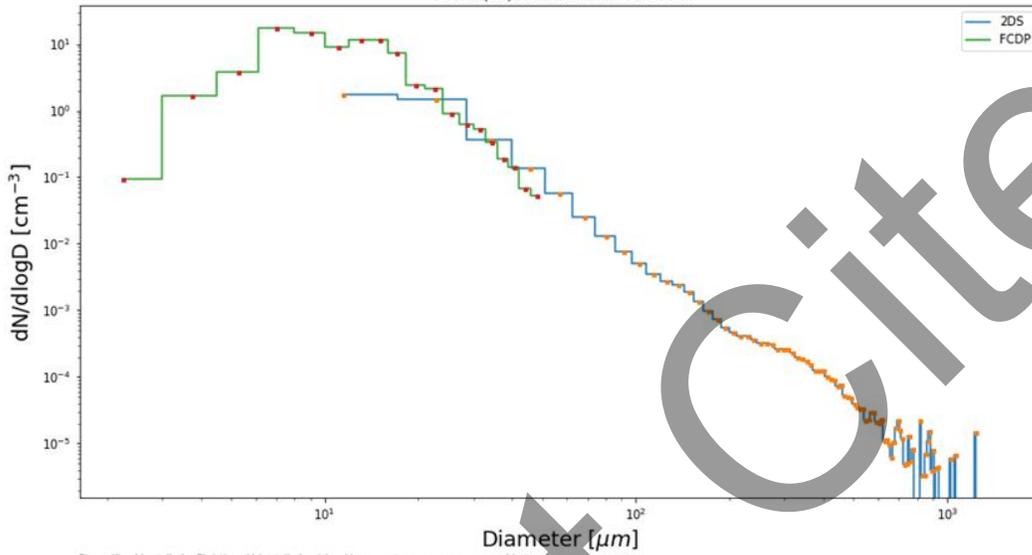
Do Not Cite!

PSD ACTIVATE

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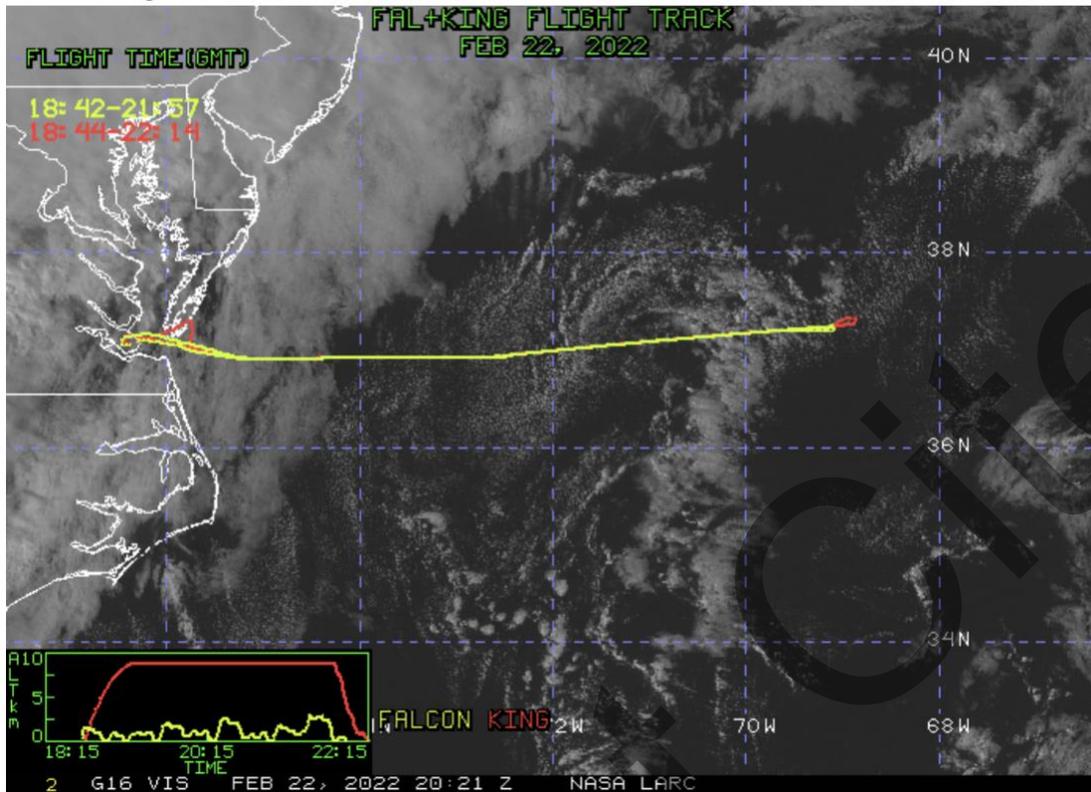


PSD 22/02/2022 18:20:19-21:54:40

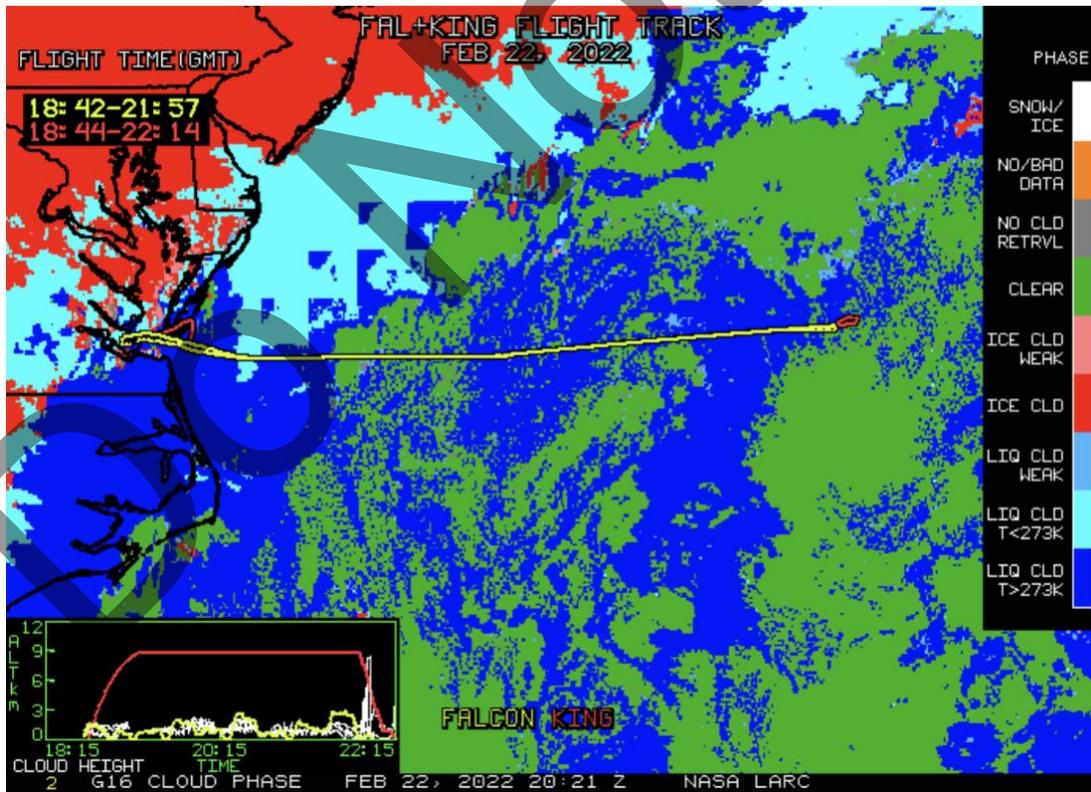


Only pure liquid clouds with Precip.

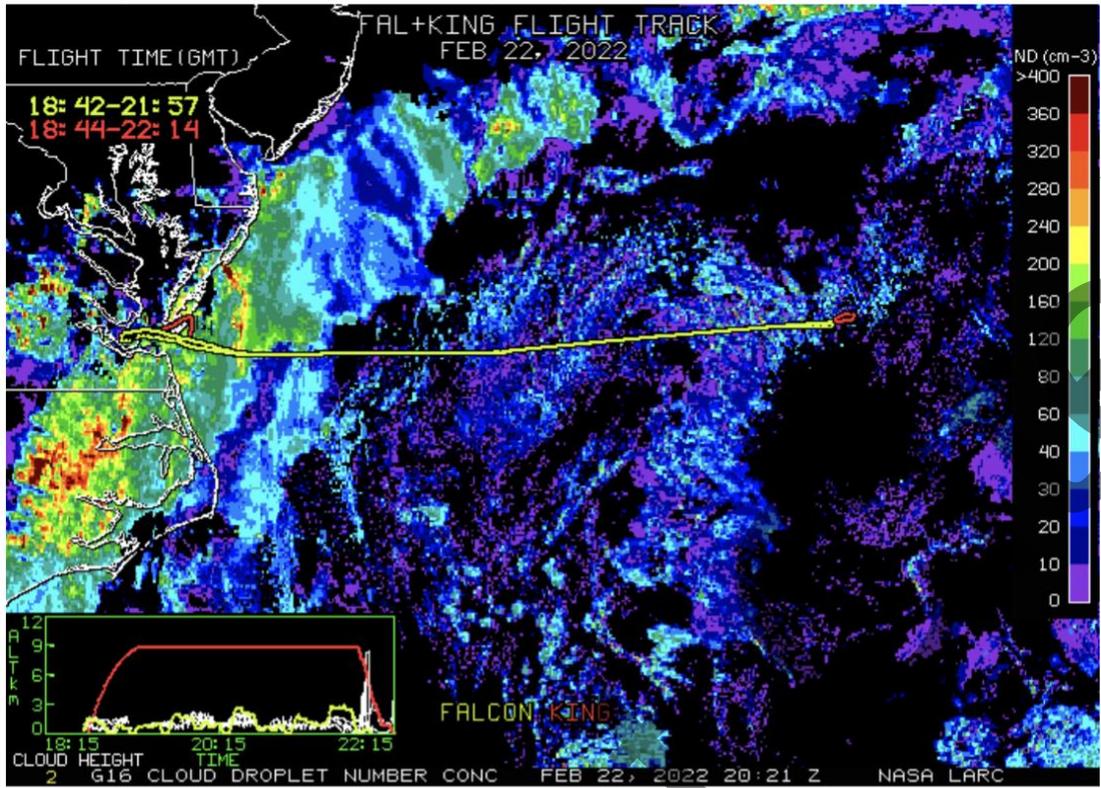
Visible Image



Cloud Phase



Cloud Droplet Number Concentration (cm-3)



Cloud-Top Height (Kft-ASL)

